

In re Patent Application of:
Jiang ET AL.
Serial No. 09/745,033
Filed: December 20, 2000

IN THE CLAIMS

1-59. (Previously Cancelled)

60. (Currently Amended) A fiber optic module comprising:
a first optoelectronic device to couple photons into or receive photons out of a first optical fiber;
a first printed circuit board coupled to the first optoelectronic device parallel to an optical axis of the first optoelectronic device, the first printed circuit board having one or more pins;
a shielded housing spaced around the first printed circuit board, the shielded housing to reduce electromagnetic interference (EMI); and
a base coupled to the shielded housing, the base extending along a length of and perpendicular to the first printed circuit board, the base having an opening for the one or more pins of the first printed circuit board to extend through; wherein the fiber optic module mounts to a system printed circuit board such that the first printed circuit board is perpendicular to the system printed circuit board and the optical axis of the first optoelectronic device is parallel to the system printed circuit board.

61. (Previously Presented) The fiber optic module of claim 60 wherein,
the first optoelectronic device has a first terminal

In re Patent Application of:

Jiang ET AL.

Serial No. 09/745,033

Filed: December 20, 2000

electrically coupled to one side of the first printed circuit board and a second terminal electrically coupled to an opposite side of the first printed circuit board.

62. (Previously Presented) The fiber optic module of claim 60 wherein,

the first printed circuit board is a vertical printed circuit board perpendicular to a horizontal plane and the optical axis of the first optoelectronic device is parallel to the horizontal plane.

63. (Cancelled)

64. (Currently amended) The fiber optic module of claim 60, 63 wherein, the one or more pins of the first printed circuit board couple to the system printed circuit board.

65. (Currently amended) The fiber optic module of claim 60, 63 wherein, the one or more pins of the first printed circuit board couple to a connector of the system printed circuit board.

66. (Previously Presented) The fiber optic module of claim 60 further comprising:

a first lens to focus photons between the first optoelectronic device and the optical fiber.

In re Patent Application of:

Jiang ET AL.

Serial No. **09/745,033**

Filed: **December 20, 2000**

67. (Previously Presented) The fiber optic module of claim 60 wherein:

the shielded housing is electrically coupled to ground.

68. (Previously Presented) The fiber optic module of claim 67 wherein:

the shielded housing electrically couples to ground by coupling to a system chassis.

69. (Previously Presented) The fiber optic module of claim 67 wherein:

the shielded housing electrically couples to ground through a trace on the first printed circuit board which is coupled to one of the one or more pins of the first printed circuit board.

70. (Previously Amended) The fiber optic module of claim 60 wherein,

the shielded housing includes the base as a portion thereof.

71. (Previously Amended) The fiber optic module of claim 60 wherein,

the base has a plurality of openings from which the pins of the first printed board extend.

72. (Previously Presented) The fiber optic module of claim 60 further comprising:

a nose to receive an optical fiber connector and hold an

In re Patent Application of:

Jiang ET AL.

Serial No. 09/745,033

Filed: December 20, 2000

optical fiber substantially fixed and aligned with the optical axis of the first optoelectronic device.

73. (Previously Presented) The fiber optic module of claim 72 wherein,

the nose provides shielding to reduce electromagnetic interference (EMI).

74. (Previously Presented) The fiber optic module of claim 60 further comprising:

a second optoelectronic device to receive photons out of or couple photons into a second optical fiber;

a second printed circuit board parallel to the first printed circuit board, the second printed circuit board coupled to the second optoelectronic device parallel to an optical axis of the second optoelectronic device, the second printed circuit board having a second plurality of pins; and wherein, the shielded housing is spaced around the first and second printed circuit boards to reduce electromagnetic interference (EMI).

75. (Previously Presented) The fiber optic module of claim 74 wherein,

the second optoelectronic device has a first terminal coupled to one side of the second printed circuit board and a second terminal coupled to an opposite side of the second printed circuit board.

In re Patent Application of:

Jiang ET AL.

Serial No. **09/745,033**

Filed: **December 20, 2000**

76. (Previously Presented) The fiber optic module of claim 74 wherein,

the shielded housing includes the base as a portion thereof, the base having openings from which the one or more pins of the first printed board extend and the one or more pins of second printed circuit board extend.

77. (Previously Presented) The fiber optic module of claim 74 wherein,

the base has openings from which the one or more pins of the first printed board extend and the one or more pins of second printed circuit board extend.

78. (Previously Presented) The fiber optic module of claim 74 further comprising:

a nose to receive a first optical fiber connector and hold a first optical fiber substantially fixed and aligned with the optical axis of the first optoelectronic device and to receive a second optical fiber connector and hold a second optical fiber substantially fixed and aligned with the optical axis of the second optoelectronic device.

79. (Previously Presented) The fiber optic module of claim 78 wherein,

the nose provides shielding to reduce electromagnetic interference (EMI).

80. (Previously Presented) The fiber optic module of claim 74 wherein,

In re Patent Application of:

Jiang ET AL.

Serial No. **09/745,033**

Filed: **December 20, 2000**

the first printed circuit board and the second printed circuit board are vertical printed circuit boards perpendicular to a horizontal plane.

81. (Previously Presented) The fiber optic module of claim 74 wherein,

the first printed circuit board and the second printed circuit board are vertical printed circuit boards perpendicular to a system printed circuit board when the fiber optic module is mounted thereto.

82. (Previously Presented) The fiber optic module of claim 74 further comprising:

an internal shield between the first printed circuit board and the second printed circuit board and parallel therewith and wherein, the shielded housing is spaced around the first printed circuit board and the second printed circuit board to reduce electromagnetic interference (EMI).

83. (Cancelled)

84. (Cancelled)

85. (Cancelled)

86. (Cancelled)

87. (Cancelled)

88. (Cancelled)

89. (Cancelled)

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In re Patent Application of:

Jiang ET AL.

Serial No. **09/745,033**

Filed: **December 20, 2000**

93. (Cancelled)

94. (Cancelled)

95. (Cancelled)

96. (Cancelled)

97. (Cancelled)

98. (Cancelled)

99. (Cancelled)

100. (Previously Presented) The fiber optic module of claim 60 wherein,

the shielded housing is a metal housing.

101. (Previously Presented) The fiber optic module of claim 60 wherein,

the shielded housing is a metal plated plastic housing.

102. (Previously Presented) The fiber optic module of claim 74 wherein,

the first optoelectronic device is a photodetector to receive photons out of the first optical fiber,

the second optoelectronic device is an emitter to couple photons into the second optical fiber, and

the fiber optic module is a fiber optic transceiver module.

103. (Cancelled)

104. (Cancelled)

105. (Cancelled)

106. (Cancelled)

107. (Cancelled)

In re Patent Application of:

Jiang ET AL.

Serial No. **09/745,033**

Filed: **December 20, 2000**

108. (Cancelled)

109. (Cancelled)

110. (Cancelled)

111. (Cancelled)

112. (Cancelled)

113. (Cancelled)

114. (Cancelled)

115. (Cancelled)

116. (Cancelled)